



United States Department of Agriculture  
Forest Service

# Blanche Park Reservoir Environmental Assessment

Grand Valley Ranger District

Grand Mesa, Uncompahgre and Gunnison National Forest

Delta County, Colorado

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## Introduction

The Grand Mesa Water Conservancy District (Conservancy District) is proposing to rebuild an existing dam and reservoir at Blanche Park on about 17.2 acres (Project). These actions are proposed to be implemented on the Grand Mesa, Uncompahgre and Gunnison National Forest, managed by the United States Forest Service (USFS) Grand Valley Ranger District.

The USFS has prepared this environmental assessment (EA) to determine whether reconstruction of Blanche Park Reservoir, including granting a short term special use permit for rebuilding the existing dam and constructing an access road, may significantly affect the quality of the human environment and thereby require the preparation of an environmental impact statement. By preparing this EA, the USFS is fulfilling agency policy and direction to comply with the National Environmental Policy Act (NEPA). For more details of the proposed action, see the Proposed Action and Alternatives section of this document.

Blanche Park Reservoir is located in the Surface Creek watershed on National Forest System (NFS) lands and authorized by an 1891 easement, fed by an unnamed intermittent tributary (Figure 1). Blanche Park Reservoir was constructed and enlarged between 1894 and 1908 for purposes of irrigation, with a capacity of 55 acre-feet (AF) and surface area of 11 acres. In 1917 the capacity was enlarged to 124 AF with a surface area of 16 acres. In about 1946, the reservoir was breached; the reservoir has been inoperable since that time. The mission of the Conservancy District is to secure and deliver water for multiple uses. The purpose of the Blanche Park project is to allow the Conservancy District to provide agricultural water from this facility. The proposed reconstructed reservoir would be used as an irrigation and stock watering source for existing agricultural operations near Cedaredge. The reservoir is within Hydrologic Unit 14010005, Colorado Headwaters-Plateau, and is eventually tributary to the Colorado River.

## Proposed Project Location

The existing Blanche Park Dam is located near National Forest System Road (NFSR) 125 on the Grand Mesa. The project is approximately 10.5 miles to the north-northeast of Cedaredge, Colorado, in the Surface Creek watershed, in Section 35, Township 11 South, Range 94 West, of the Sixth Principal Meridian. The UTM coordinates of the approximate center of the project area are NAD 83: Zone 13N; 251515E, 4326755N; Latitude 39.054219 N, Longitude -107.870508 E; USGS Leon Peak, CO Quadrangles; Delta County, Colorado (Figure 1).

The project area, including the dam (0.8 acre), access road (0.9 acre), and inundated area (15.5 acre) encompasses a total of 17.2 acres on Grand Mesa. Surrounding land uses near Blanche Park Reservoir include recreation, timber harvesting, hunting, mining, cattle grazing and other agricultural activities, and seasonal or year-round residence.

## Need for the Proposal

The purpose and need of this project is to rebuild the dam at Blanche Park, a facility owned by the Grand Mesa Water Conservancy District and authorized on the national forest by an 1891 Easement. The original dam was breached about 1946 and the facility has not been operated since then. The Conservancy District needs to perfect a 125 acre foot water right associated with the site. Rebuilding the reservoir would provide additional water storage capacity for the

Conservancy District and allow a conditional water right for the site to become absolute. While the dam and reservoir are authorized by an 1891 Easement, special use authorizations are needed in conformance with the 1991 Amended Land and Resource Management Plan (USFS 1991 for the construction of the dam and access road, as well as the long term operation and maintenance of the administrative access road to the Reservoir.

## Public Involvement and Tribal Consultation

A legal notice soliciting scoping comments on the proposed Blanche Park Dam Reconstruction project was published in the Grand Junction Daily Sentinel and on the Forest Service website on November 4, 2016. The scoping period was held for 30 days, in conformance with 36 CFR 215, between November 4 and December 4, 2016. The Conservancy District membership was also consulted. No public or agency comments were received during the 30-day scoping period.

The Forest Service consulted the following individuals, Federal, State, tribal, and local agencies during the development of this EA:

### U.S. Army Corps of Engineers (Corps)

The Corps reviewed the Blanche Park Reservoir project and determined in a letter dated April 19, 2016 (Appendix A) that the project falls under exemption to Section 404 of the Clean Water Act, due to its agricultural nature. A permit would not be required; however, “Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented onsite to achieve this end.”

### U.S. Fish and Wildlife Service (Service)

Formal consultation with the Service was initiated on July 29, 2016. The Service determined in a letter dated September 7, 2016 (Appendix A) that the project “may affect, but is not likely to adversely affect” the Canada lynx (*Lynx canadensis*). Further, regarding effects to the endangered Colorado River fishes, the Service determined that the project fits under the umbrella of the Gunnison River Basin Programmatic Biological Opinion (PBO) and would avoid the likelihood of jeopardy or adverse modification of critical habitat for depletion impacts to the Gunnison River basin. Water depletions associated with the project are expected to average 44.06 acre-feet (AF) per year, which are less than 100 AF per year established by the Service as the benchmark for projects to fit under the umbrella PBO.

### State Historical Preservation Office (SHPO)

Formal consultation with the Colorado SHPO was initiated on November 30, 2010 and June 20, 2012. The 2010 consultation letter was in regards to the initial Blanche Park Reservoir project entitled *Inventory Report of Grand Mesa Reservoirs: Peak and Blanche Park*. The Forest Service recommended a determination of *no historic properties affected* as none of the three recorded cultural resources are considered eligible for listing on the National Register of Historic Places. No response from the Colorado SHPO was received. Per the National Historic Preservation Act (1966) Section 106 regulations (36 CFR Part 800.4(d)(1)), if no response from SHPO is received within 30 days of receipt of the documents, the agency has completed its Section 106 responsibilities and no further documentation is necessary.



The 2012 SHPO consultation was in regards to the construction of a new access road to Blanche Park Reservoir. The survey for the access road was reported to SHPO under the *Archaeological Clearance for Addendum to Blanche Park Reservoir and Access Road Inventory* report. The project survey identified no new historic properties. No response from the Colorado SHPO is required for a negative results cultural inventory as directed under a programmatic agreement between the Colorado U.S.D.A National Forests. No further documentation is necessary.

## Proposed Action and Alternatives

The following alternatives were considered:

### No Action

Under the No Action Alternative, the Forest Service would not authorize a short-term special use permit for the proposed action, and the dam would not be reconstructed. An access road would not be built. The existing dam (approximately 230 feet in total length) would remain in place.

### Proposed Action

Under the proposed action, the existing dam would be reconstructed and a new underdrain installed. The new design must meet criteria set by the Colorado Division of Water Resources Dam Safety program. The capacity of a rebuilt reservoir at the Blanche Park site would be approximately 125.5 AF, with a normal pool elevation of about 10,088 feet. At normal pool, the surface area of the reservoir would be about 15.5 acres.

The access road and dam project area (approximately 1.7 acres, see Figure 2 and Table 1) would be cleared and grubbed, including the removal and disposal of trees under 18" in diameter, brush and vegetation from the project area as needed and the area to receive fill would be cleared and grubbed of all organic or deleterious materials to allow for compaction and structural fill placement. The reservoir pool (15.5 acres) would not be altered during construction, and would be inundated for a period of 4 to 6 weeks once the outlet works are installed and closed during the first and subsequent normal seasonal reservoir operations.

**Table 1: Blanche Park Reservoir Construction and Inundation Footprint**

<b>Blanche Park Reservoir Feature</b>	<b>Acres affected</b>
<b>Dam</b>	0.8
<b>Inundation</b>	15.5
<b>Road</b>	0.9
<b>TOTAL</b>	17.2

The exact construction means, methods and phasing would be subject to decisions made by the contractor selected for the project. The contractor would determine the equipment used, schedule and personnel required on site. Equipment for construction may include the following:

- One or two track hoes;
- One D-9 dozer (or similar);
- One mini-excavator or backhoe;
- One front end loader;
- 1 to 3 haul trucks (10 to 20 cubic yard capacity; for hauling);
- 2 to 5 pickup trucks or cars for transportation of personnel to and from the project area.

## **Access**

Access from Surface Creek Road (NFSR 125) west of the dam would be built for use during construction (see Figure 2). After construction is complete, the road would provide access to the dam for general maintenance.

For the duration of construction, the new access road would have a running surface approximately 12 feet wide by 1,290 feet long, beginning at Surface Creek Road and traversing to the dam location. Due to the steep terrain, the average cut and fill width of the road would be about 30 feet. The elevation of the proposed access road would range from 9,965 feet to 10,080 feet. A locked gate would be installed at the entrance to preclude public access. After construction, the road would be reclaimed to an All-Terrain Vehicle (ATV) trail to be used for maintenance access only, as described in the Reclamation section. Portions of the proposed access road appear to overlap a previous road, potentially the access road associated with the original dam.

In addition to the new access road, construction equipment would access the project area using Trickle Park Road (NFSR 121) and Surface Creek Road (NFSR 125) (See Figure 1). Existing roads used by construction equipment would be maintained by grading as needed to provide an adequate driving surface for other road users. Use and maintenance of NFSRs would be permitted under a Road Use Permit.

## **Dam construction**

The new dam would be an earthen dam with the top of the embankment at about 10,093 feet. The existing embankment, with an elevation of 10,083 to 10,086 feet (about 2,724 cubic yards), would be re-shaped, and a total of about 11,452 cubic yards of fill placed for the dam. A mat composed of 9-inch riprap, about 1-foot in thickness would be installed to protect the dam from scouring. A temporary staging area (150 by 60-foot) for the construction would be established within the embankment area on the south side of the dam, then shaped for inundation. Depending on the test results of the existing dam materials, fill materials may need to be mixed to achieve the appropriate composition to meet compression requirements. It is anticipated that materials would be processed and mixed using excess excavated material already stored at the Military Park Pit, located about 0.75 miles north of the project area.

A concrete headwall, concrete caissons, a head gate, stem and wheel, and erosion control facilities would be installed as shown in design (Appendix B). An emergency spillway is located on the north end of the dam structure.

A water control plan would be implemented to address needs for water diversion and dewatering during construction. It is anticipated that a temporary channel or piping system would be installed during construction. The contractor would be responsible for identifying a water control plan that is constrained to the construction footprint as shown on the plan sheets (Appendix B). In addition to a water control plan, the contractor and the Conservancy District would be responsible for creating and implementing a Stormwater Pollution Prevention Plan (SWPPP) in conformance with state requirements and the federal Clean Water Act. The SWPPP would detail site-specific best management practices to reduce potential erosion sediment production and transport. Berms, or ditches, or other adaptive measures would be put in place prior to any earth-disturbing activity to direct storm water to stabilized areas, slow velocity, prevent erosion, and support infiltration into soils.

## Water Use

Water would be used for road bed and dam embankment compaction, and potentially dust suppression, and hydraulic mulching to revegetate sloped areas. The contractor would use water from Peak Reservoir, which is owned by the Conservancy District. Due to the small size of the project area and limited amount of fill, water usage is expected to be minor.

## Hazardous Materials

The only hazardous materials that would be used for this project are fuel, oil and lubricants for construction equipment or machinery. No hazardous materials would be stored on site; fuel trucks would be used. The construction contractor would be required to use secondary containment when refueling, and to clean up any spills of these materials immediately as required by a Spill Prevention, Countermeasures and Control (SPCC) Plan (see Design Features).

## Operation

The proposed operation of the reservoir would include holding water in Blanche Park for a brief period during spring run-off, and releasing that water into Trickle Park Reservoir (also known as Park Reservoir as shown on Figure 1, approximately 0.2 mile downstream) when space becomes available. Snow melt may occur between mid-May and mid-June at the elevations in the project area, and particularly along the shaded southern edges of the reservoir snow remains later in the year. There is not an anticipated firm operating schedule for releasing water out of Blanche Park; however, water would be released very early in the year, potentially by mid-June and by mid-July at the latest. Anticipated length of storage for water within Blanche Park is about 4 to 6 weeks. The approximate maximum water depth at the dam is about 22 feet, and is much shallower at the shoreline of the reservoir pool, with minimum depth of about 6 to 12 inches.

## Reclamation

At the end of the construction phase, disturbed surfaces would be re-seeded with a USFS-approved seed mix (see Table 2), and treated with mulch as needed to reclaim and restore the project area. Portions of the access road would be reclaimed, and the long-term road width would be only wide enough to accommodate an ATV for maintenance access. The project area would be monitored for noxious weeds which would be documented and treated in coordination with the USFS. The area would be monitored by a qualified contractor (ERO) hired by the Conservancy District, and the USFS would be updated on reclamation status and provided documentation.

Seeded areas would be inspected by a qualified contractor to ensure that the soil stabilization method (*e.g.* surface roughening, crimp mulch, etc.) was applied correctly and has not been compromised since it was applied. The area would also be inspected for erosion and sediment deposition. Following inspection, maintenance items would include re-grading and seeding bare or areas of thin vegetative growth. If seeding cannot be accomplished due to seasonal or other constraints, temporary stabilization, such as mulch and mulch tackifier, would be used. The Conservancy District would hire a qualified contractor to inspect and maintain this temporary stabilization until permanent seeding is allowed.

**Table 2. Seed Mix (Aspen/Spruce)**

Species	Rate	Percent of Mix
Mountain Brome Grass	5lbs/ac	26%
Slender Wheatgrass	3lbs/ac	16%

Species	Rate	Percent of Mix
<b>Thick Wheatgrass</b>	3lbs/ac	16%
<b>Canby Bluegrass</b>	3lbs/ac	16%
<b>Blue Wild Rye</b>	5lbs/ac	26%

All disturbed areas would be re-seeded per the above Forest Service specifications with a certified Weed Free Seed Mix for Aspen/Spruce type, 8,000-9,500 feet in elevation.

## Schedule

The proposed construction timeline includes the construction season in summer and fall 2017 and 2018. Construction would occur over a 3 to 4-month period each season, and require a crew of 2 to 5 persons.

## Project Design Features

The following design features are proposed as part of the Proposed Action, and would be implemented by the applicant (Conservancy District). These design features are in addition to those already described in the Proposed Action.

### Air Quality

1. Air quality would be maintained by permitting of all regulated air pollution sources through the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division, assuring compliance with all federal and state standards, if applicable.
2. Such additional methods and devices as are reasonable to prevent, control and otherwise minimize atmospheric emissions or discharges of air contaminants would be used, including:
  - ♦ No burning of cleared materials, combustible construction materials and rubbish.
  - ♦ Dust abatement techniques shall be used as directed by the Forest Service to minimize dust in a way such that visibility and air quality are not affected and a hazardous condition is not created. Dust will not reach a height of 12 feet.
  - ♦ The volume of water withdrawals used for dust abatement will be reported to the Forest Service.

### Hazardous Materials and Emergency Response

1. The SPCC Plan described in the Soils Design features would assure compliance with all Federal and State requirements.
2. All fueling procedures on-site would occur within the protection of secondary containment.
3. A Fire/Emergency Response/Health and Safety Plan that addresses the potential for accidents and injuries, and other emergencies would be prepared and submitted to the Forest Service for approval and kept onsite. This plan would be made available to the Forest Service prior to construction and kept on all active locations.

### Historical and Archaeological Resources and Paleontology

1. All employees of the proponent, contractors, subcontractors or other parties associated with the project would be instructed that, upon discovering evidence of possible prehistorical,

historical or archeological objects, work would cease immediately at that location and the engineer would be notified, giving the location and nature of the findings. The Forest Service would be notified immediately. Care would be exercised so as not to disturb or damage artifacts or fossils uncovered during excavation operations.

2. The authorized officer would be immediately notified of all antiquities or other objects of historic or scientific interest, including but not limited to historic or prehistoric ruins, fossils, or artifacts discovered in connection with the use and occupancy authorized by this permit. The applicant's employees, contractors, etc., would leave these discoveries intact and in place until directed otherwise by the authorized officer. Measures to protect the environment and mitigate environmental damage specified by the authorized officer would be the responsibility of the proponent.
3. During project implementation, in the unlikely event of an inadvertent encounter of Native American remains or grave objects, the Native American Graves Protection and Repatriation Act (NAGPRA) requires that all activities must cease in their discovery area, that a reasonable effort be made to protect the items found or unearthed, and that immediate notification be made to the agency Authorized Officers as well as the appropriate Native American group(s) (IV C. 2). Notice of such a discovery may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions may also require compliance under provisions of the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resources Protection Act.

## Hydrology

1. Implementation of Best Management Practices for the Proposed Action and the alternatives as described in the Soils Section below would minimize effects, such as sedimentation, from the construction activities on affected streams.
2. Refueling or lubricating and storage of hazardous materials, chemicals, fuels, etc., would only take place in designated locations that are more than 100 feet from wetlands and other water bodies or drainages

## Noise

Noise would be minimized by compliance with applicable laws and regulations regarding the prevention, control and abatement of harmful noise levels.

## Soils

1. A Stormwater Management Plan would be prepared and submitted to the appropriate County or State entity for approval, and to the Forest Service for review, at least 30 days prior to starting construction.
2. Sediment and erosion controls would be installed prior to work involving site clearing, stripping and stockpiling topsoil, excavation and earthwork. The sediment and erosion controls would be maintained and repaired during the course of construction.
3. Excavated materials or other construction materials would not be stockpiled or wasted near or on stream banks, lake shorelines or other watercourse perimeters where they can be washed away by high water or storm runoff, or can in any way encroach upon the watercourse itself.
4. At road intersections with existing drainages that cannot be easily carried by use of a temporary culvert, low-water crossings would be established. The approaches to any

crossing would be armored by placing a minimum 8-inch depth of 1- to 3-inches of clean crushed rock, 14-feet wide for a distance of 20 feet on each side of the drainage to minimize siltation, bank rutting and erosion. Crossings would be constructed perpendicular to the flow line. When access is no longer needed, any temporary culverts and associated fill would be removed. Hardened low water fords shall be left in place. Silt fences or appropriate sediment control devices would be used to prevent siltation into existing drainages, ponds or associated riparian areas.

5. The proponent shall prepare a Spill Prevention, Control and Countermeasures Plan (SPCC) and submit it to the appropriate State entity for approval and to the Forest Service for review at least 30 days in advance of construction.
6. Soil disturbing actions would be avoided during long periods of heavy rain or wet soils to prevent excessive rutting and mobilization of sediment during runoff events.
7. Because the construction would last several summers, plans to stabilize the construction sites over the winter would be developed and approved by the Forest Service in order to prevent runoff and sediment escaping the work sites.
8. Cross-drain spacing on roads will conform to the following specifications:

**Table 3. Maximum cross-drain spacing (feet) based on soil types**

Road grade %	Soil erosiveness*			
	Extra	High	Moderate	Low
<b>1-3</b>	600	1,000	1,000	1,000
<b>4-6</b>	300	540	680	1,000
<b>7-9</b>	200	360	450	670
<b>10-12</b>	150	270	340	510
<b>13-15</b>	120	220	270	410

*\*The erosiveness classifications listed above are based on the Unified Soil Classification system (ASTM D 2487). Extra erosive soils include silts and sands with little or no binder. Highly erodible soils include silts and sands with moderate binder. Moderate erosive soils include gravels and fines or sands with little or no fines. Low erosive soils include gravels with no fines.*

9. During road reconstruction, initial clearing operations would fully contain material on-site and not allow material to move into wetlands or into the riparian zone. Excess excavated material and construction debris developed along roads near streams would be disposed of in an area outside of the riparian area and floodplain.
10. Upon completion of construction, the proponent or their contractor would re-grade, prepare a seed bed and reseed temporary road improvements
11. Any new road construction would be designed to avoid excessive grades (greater than 12%) for distance in excess of 200 feet.
12. The proponent will obtain a mineral material contract from the Forest Service for use of borrow areas, both inside and outside of the current reservoir basin.
13. Seed
  - ♦ Grass seed would be from the same or previous year's crop. Only certified weed-free seed would be used. All seed would be free of prohibited noxious weeds (as defined by

the State), and would contain no greater than 1% other weeds. The labels from the seed bags would be provided to the Forest Service.

- ◆ All sites will be seeded with the mixture listed in Table 2 at a total rate of 19 lbs/acre of pure, live seed.
- ◆ Seed would be furnished and delivered premixed in the indicated proportions. Seed bag tags, or the equivalent, would be provided for each delivery of seed. Tags would show the guaranteed percentages of purity, weed content, germination, net-weight, date of seed testing and date of shipment.

14. Seedbed Preparation:

- ◆ Temporarily disturbed areas will be treated with the appropriate techniques depending on slopes and location. Topsoil in most places is shallow and would be salvaged where available, and spread at depths comparable to salvage depths. Areas will be reseeded in coordination with the USFS, potentially using hydromulching for steep areas and crimping for other areas. Overall, an effective method will be used given the steep slopes, temporary impact areas, and other considerations such as feasibility of vegetation success and cost.
- ◆ Topsoil would not be placed in water or while frozen or muddy conditions exist.
- ◆ In appropriate areas, topsoil would be compacted with a CAT D6 bulldozer or larger to the appropriate tilth, density, consistency and friability to provide a suitable growth medium for sprouting and seedling survival.
- ◆ All areas would be graded to drain. The maximum slope steepness will be 3:1 unless otherwise shown on the project drawings or approved in writing by the project engineer.
- ◆ Where possible based on slope, final surface of the topsoil would be left in a rough or “pocked” condition to encourage better vegetation growth. There would not be any localized low spots that would allow water to accumulate.
- ◆ Where possible based on slope, seedbed would be prepared by contour cultivating 4-6-inches deep with a harrow or disc. All other areas that have been disturbed or compacted by equipment would be scarified to receive seed.

15. Seed Application: Seeding would be accomplished between September 1st and October 30th. No seeding would take place when soils are frozen or excessively wet or dry.

16. Mulch

- ◆ Certified weed free straw mulch, if used, would be inspected and bound with twine as regulated by the Weed Free Forage Act, CRS Title 35, Article 27.5 and administered by the Colorado Department of Agriculture. Mulch would be accompanied by a certificate of compliance as defined in the rules and regulations of the aforementioned Act. Tags from the straw mulch would be provided to the Forest Service.
- ◆ Where possible and based on coordination with the USFS, uniform depth of certified weed free straw mulch would be applied to all seeded areas. Mulch would be applied at the rate of 2,000 lbs/acre.
- ◆ Hydro-seeding could be applied on steep slopes if desired by the Conservancy District, depending on coordination with the USFS.

17. Monitoring and Completion of Reclamation



- ◆ All seeded areas would be maintained in good condition, reseeding and mulching if and when necessary, until a good, healthy, uniform growth is established over the entire area seeded and until vegetation is established.
- ◆ On slopes, actions would be taken to prevent washouts. Any washout that occurs would be re-graded and reseeded and the reseeded area would be maintained until vegetation is established.
- ◆ The Conservancy District would be responsible for hiring a qualified contractor (ERO) to monitor areas that have been temporarily stabilized and do not have a protective vegetative cover. The USFS would be updated on reclamation status and provided documentation. An area would be considered to be satisfactorily reclaimed when: a) Soil erosion resulting from the operation has been stabilized and b) A vegetative cover at least equal to that present prior to disturbance and a plant species composition at least as desirable as that present prior to disturbance has been established.
- ◆ Areas not demonstrating satisfactory reclamations as outlined above, would be rehabilitated, reseeded and maintained meeting all requirements as specified above.

### Solid and Sanitary Waste

1. All solid waste (trash) that result from construction and completion activities would be contained in a metal bear-proof trash cage. All material in the trash cage would be removed from the location and deposited in an approved sanitary landfill.
2. Portable toilets would be provided for construction workers at the construction site and the work camp. These would be maintained and removed by the proponent as appropriate.

### Terrestrial Wildlife

1. Pre-construction surveys have been conducted. No special status species was found to be present.
2. For Canada lynx, no snow compaction above baseline levels would be permitted; however, work during the winter is not anticipated. Trees would be cut and removed for road construction. Vegetation clearing activities would occur after August 1 each year to avoid effects to nesting migratory birds. If clearing activities are needed prior to August 1, migratory bird nest surveys would be required prior to clearing to identify and avoid effects to active nests.

### Travel Management and Roads

1. A Forest Service Road Use Permit would be obtained by the proponent for maintenance and use of NFSRs accessing the reservoir sites. Road Maintenance: NFSRs would be maintained according to Forest Service road management objectives. Existing NFSRs currently open for use would also receive pre-haul maintenance depending upon their condition and the needs of the project. Pre-haul maintenance would not include road reconstruction or repairs of an extraordinary nature, but would include maintenance of drainage structures, grading the road surface, corrections to cut/fill failures, spot rock applications and rolling dips, etc. the proponent would consult with the Forest Service on the degree and manner of preconstruction maintenance, road reconstruction, and ongoing maintenance that would be required.
2. A Road Use Permit would be submitted to the Forest Service for approval a minimum of 30 days before construction begins. The Road Use Permit would include methods for road

maintenance, traffic control and dust suppression requirements for traffic and road use on NFSR 125 and NFSR 121.

3. Project-related vehicular traffic would be restricted to approved locations. Operational equipment would be restricted to the road prism and construction site at all times.
4. Mobilization and demobilization of heavy equipment would be scheduled during the week and not on weekends or holidays to avoid high public traffic periods.
5. The temporary access road would be converted to an ATV trail as soon as possible following construction and reclamation activities. The ATV trail would be used for operations and maintenance. A gate would be maintained to preclude public access.

## Vegetation

1. A Noxious Weed Management Plan would be submitted and approved by the Forest Service prior to construction. The plan would outline strategies to preclude the inadvertent introduction, establishment or proliferation of any noxious weed species in the Project Area. This plan would address four goals - prevention, treatment, monitoring and cooperative actions - and would provide specific management objectives and specific actions agreed to by the Conservancy District and approved by the Forest Service.
2. Preventative actions would include the cleaning of vehicles and equipment and inspection by the Forest Service prior to bringing them into the Project Area.
3. For imported gravel and fill material to be used in construction activities, every effort will be made to use a weed free source.
4. Weed surveys would be conducted prior to construction.
5. Treatments would be developed using integrated weed management principles for each species and situation. Treatments may include hand pulling, grubbing, mowing, mulching, seeding, burning, herbicide application and soil management.
6. Monitoring of noxious weeds would be conducted on a scheduled basis to detect new infestations, evaluate prevention and treatment success, and identify the need for re-treatment. The Conservancy District would hire a qualified contractor (ERO) to monitor the project area for noxious weeds on a scheduled basis, and provide monitoring results to the USFS.
7. The Conservancy District would coordinate its efforts with the Forest Service to manage noxious weeds.
8. For disposal of slash, the contractor would employ a “lop and scatter” strategy, disposing of slash on site to a maximum height of 2 feet.
9. Marketable timber would be distributed to fuel wood permit holders in the vicinity of the project or given to those in Cedaredge who are unable to cut for themselves.
10. The Conservancy District and the contractor will coordinate with the Forest Service to manage stump removal. The preference is for all stumps to leave the Forest.

During issuance of the Timber permit, consideration of allowing the trees to be cut mechanically with excavator will be discussed. The excavator pulls the tree out of the ground with roots/stump still attached, then a chainsaw would be used to remove the stump from the timber. Details and options will be discussed with the Forester during the permitting process and a mutually agreeable strategy developed.

## Visual Resources

To limit visual impacts, the new road has been located so it is visually screened (by topography or forest vegetation) from travel ways.

## Environmental Impacts of the Proposed Action and Alternatives

This section summarizes the potential impacts of the proposed action and no action alternatives for each impacted resource. The following resources would not be impacted and/or would be mitigated to avoid effects, and therefore are not further analyzed:

### Biological Resources:

- Weeds: Design features include weed management and control to minimize effects.
- Game/wildlife/birds. Design features include migratory bird timing constraints and/or survey requirements, and no sensitive big game or other wildlife habitat has been identified as potentially affected.

### Heritage and Human Environment:

- Cultural Resources: SHPO concurred there would be no adverse effect to historic properties.
- Social and Economic: No social or economic effects are expected.

### Land Resources:

- Hunting: Design features include posting notice to inform hunters during construction; work would normally not be conducted on weekends. Effects to hunting are not expected.
- Farmland: There is no farmland in the construction project area. About 75% of land in the Surface Creek Drainage falls within 3 categories: Prime farmland if irrigated, Farmlands of unique importance, and Farmlands of statewide importance (NRCS 2017). Water from Blanche Park would be applied to one of these 3 categories of farmland.
- Grazing: Effects to grazing are negligible; about 1.7 acres of forage would be removed during dam and road construction. The area is subject to open grazing and there are no fences in the project area. The rangeland management specialist would communicate with permittees as described in the Project Design Features section above.

## Air Quality

### Affected Environment

The airshed on the Grand Mesa is classified as a Class II airshed, which means the existing air quality conditions must be protected (USFS 1991). The air quality of most of the Grand Mesa is good as it is located above the surrounding populated valleys where air quality particulates are generated and can concentrate. Gaseous pollutants, such as nitrogen dioxide (NO<sub>2</sub>) and sulfur dioxide (SO<sub>2</sub>) can be transported from urban areas and can cause acid deposition. Vehicle traffic is consistent around the project area, including passenger vehicles, four-wheel drive vehicles, ATVs, and snowmobiles.

## **Environmental Consequences**

### **No Action Alternative**

The No Action alternative would not change existing air quality conditions in the project area.

### **Proposed Action Alternative**

Under the proposed action, short-term and minor local construction effects to air quality are expected during the 6 to 10 months of construction activity. Air quality would be effected due to use of equipment on-site and release of dust during construction (see equipment listed below Table 1). Dust suppression is incorporated into the project's design features (see Project Design Features) and expected emissions are well below air quality standards for the Grand Mesa. The project is in compliance with the Clean Air Act, and no further air quality analysis is needed.

Minor amounts of carbon would be emitted into the atmosphere during construction due to increased use of equipment. Evaporation from the reservoir is expected to be minor, due to the elevation (about 10,000 feet) and the short-term storage. The project will not result in increased recreational use around the project area will not, therefore, result in chronic increases in vehicle emissions.

## **Water Resources and Water Rights**

### **Affected Environment**

Water Resources in the project area include the existing Blanche Park Reservoir standing pooled water (or pools), the unnamed intermittent tributary that flows through the breached dam within the project area, and a downstream reservoir, Park Reservoir (also known as Trickle Park Reservoir). The existing seasonal extent of open water within the Blanche Park Reservoir basin is about 0.53 acres in small pools. The unnamed tributary flows seasonally (fed by snowmelt and potentially from rainfall) from the east end of the basin to the existing breach, then continues west to the downgradient reservoir (Trickle Park). Within the basin, the drainage is small (maximum of about 2 to 3 feet wide and 1 to 2 feet deep), and substrate varies from silt to rock. The drainage flows through the existing dam breach for a length of about 50 to 60 feet. Downstream of the existing breached dam, the unnamed tributary flows about 0.2 miles through rocky, steep terrain before flowing into Trickle Park Reservoir. The dimensions of the drainage downstream of the dam are about 2 to 7 feet wide and about 4 to 6 inches deep at the Ordinary High Water Mark (OHWM). Seasonal flow is estimate from about May to July, depending on snowpack. The surface area of the downstream reservoir, Trickle Park Reservoir is about 113 acres.

Water Rights in the project area are conditional water rights from Gorsuch Reservoir (also known as Cactus Park Reservoir) that were converted to a 125-acre agricultural storage right for Blanche Park Reservoir. Water rights were documented in a ruling of Water Division 4 District Court (Case No 2015CW3029).

## **Environmental Consequences**

### **No Action Alternative**

The No Action Alternative would not change existing water resource conditions in the project area. Water rights would not be firmed and Conservancy District would not provide an additional 125 AF of agricultural water storage for irrigation in the Cedaredge area.

### **Proposed Action Alternative**

Under the Proposed Action Alternative, the open water in the Blanche Park Reservoir would increase from about 0.5 acres to about 15.5 acres, and about 100 to 150 feet of the unnamed tributary would be filled by the new dam structure (including the 50 to 60-foot section which currently flows through the existing breached dam). The change in open water surface would occur seasonally, and water would be held in the reservoir for a relatively short period of time (about 4 to 6 weeks under normal operations) during early spring/summer. When irrigation demands for water from Trickle Park Reservoir create water storage space in that reservoir, Blanche Park Reservoir would be drained. Flow in the unnamed tributary would change during spring, when the outlet works for the new reservoir are closed and flow downstream would stop during the period of time while the reservoir fills. After Blanche Park Reservoir fills, water would flow through the reservoir and be released, until the reservoir is drained for the season. Because the water rights allow for a one-time fill, after the reservoir is drained the outlet works would remain open until the following year's storage right. Under the Proposed Action Alternative water rights would be firmed and the Conservancy District would provide agricultural water for irrigation in the Cedaredge area.

Short-term construction impacts include temporary drainage diversion during the 6 to 10 months of construction, as well as increased potential risk for sedimentation/sediment transport and erosion. Design Features and other project features included in the Stormwater Management and Spill Prevention Plan would minimize these risks by incorporating storm water control into the project. After construction is complete, reclamation activities would include regrading and restoring the drainage, reseeding the surface to prevent erosion, and thereby mitigating any further effects to the unnamed tributary.

## **Soils**

### **Affected Environment**

Soils surrounding the project area on the Grand Mesa within a 5.7 square mile region were mapped (NRCS 2017) and found to contain predominately Class 170, Needleton-Scout families, on 5 to 40 percent slopes (52.3 percent of the region). Mapped areas also included Class 106, Booneville-Needleton family-Doughspon complex on 5 to 25 percent slopes, very stony (15.6 percent of the region); Class 128, Cryoborafts, Cryocherpts, and Rubble land on 5 to 65 percent slopes (12.5 percent of the region); and Class 105, Booneville, warm-Doughspon complex on 5 to 15 percent slopes, very stony (9.4 percent of the region).

Soils in the immediate vicinity of the reservoir footprint, including the existing dam structure, and the proposed access road are classified as Class 170, Needleton-Scout families complex, 5 to 40 percent slopes (NRCS 2017). Soils in the former reservoir footprint are mapped as Class 203, "Water" (NRCS 2017). Six soil pits were collected during field surveys within the former reservoir footprint. Soils in the project area were generally characterized as clay loam to sandy

clay loam (ERO 2012). Hydric soils were observed along the edges of the former reservoir pool, with organic material to depth of 3 to 8 inches and a sandy clay loam or sand below. Upland areas generally consisted of shallow soils with rock present at a depth of 6 to 12 inches.

## Environmental Consequences

### No Action Alternative

The No Action Alternative would not change existing soil conditions in the project area.

### Proposed Action Alternative

Under the Proposed Action Alternative, about 1.7 acres of temporary soil disturbance would occur for construction of the access road and dam. It is anticipated that existing material in the dam would be mixed with suitable dam material that is currently stored at the Military Park Pit north of the project area. Following construction, about 1.6 acres would be re-seeded and reclaimed, leaving a small un-reclaimed ATV route for ongoing maintenance and operation activities. In addition, about 15.5 acres of soils would be seasonally inundated, about 0.5 acres of which is already inundated in extant pools.

Construction impacts include grading a road surface, and excavation and fill associated with the dam. Soil disturbance could increase the risk of sedimentation/sediment transport and soil erosion. Design Features and other project features included in the Stormwater Management Plan would minimize these risks by incorporating storm water control into the project. After construction is complete, reclamation activities would include regrading and reclamation activities noted above. A total of about 0.1 acres of soil would remain in a disturbed condition as a permanent ATV access route.

## Vegetation

### Affected Environment

The site is a shallow-gradient grass-sedge meadow surrounded by spruce-fir forest (blue spruce [*Picea pungens*], Engelmann spruce [*Picea engelmannii*], subalpine fir [*Abies bifolia*]), with aspen (*Populus tremuloides*) at lower elevations on the west end of the project area along the proposed access road. The existing dam and nearby upland areas are predominantly brome grasses (*Bromus L.*), timothy (*Phleum pratense*), alpine bluegrass (*Poa alpina*), and western yarrow (*Achillea lanulosa*). Vegetation observed during the site visit is included in Table 4 (also see photo log, Appendix C).

**Table 4. Vegetation observed near Blanche Park Reservoir site**

Common name	Scientific name
Alpine avens	<i>Acomastylis rossii</i>
Alpine bluegrass	<i>Poa alpina</i>
Alpine pussytoes	<i>Antennaria media</i>
American bistort	<i>Bistorta bistortoides</i>
Aspen	<i>Populus tremuloides</i>

Common name	Scientific name
Beaked sedge	<i>Carex utriculata</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Blue Spruce	<i>Picea pungens</i>
Brome	<i>Bromus L.</i>
Brook saxifrage	<i>Micranthes odontoloma</i>
Cinquefoil	<i>Potentilla pensylvanica</i>
Common dandelion	<i>Taraxacum officinale</i>
Creeping bentgrass	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Elephantella	<i>Pedicularis groenlandica</i>
Engelmann spruce	<i>Picea engelmannii</i>
Fescue	<i>Festuca saximontana</i>
Fleabane	<i>Erigeron grandiflorus</i>
Hoary sedge	<i>Carex canescens</i>
Hornemann willow-herb	<i>Epilobium hornemannii</i>
Horse cinquefoil	<i>Potentilla hippiana</i>
Kentucky bluegrass	<i>Poa pratensis</i>
Large-leaved avens	<i>Geum macrophyllum</i>
Mountain lover	<i>Paxistima myrsinites</i>
Parry bottle gentiana	<i>Pneumonanthe parryi</i>
Planeleaf willow	<i>Salix planifolia</i>
Rocky Mountain fringed gentian	<i>Gentianopsis thermalis</i>
Rocky Mountain willow-herb	<i>Epilobium saximontanum</i>
Rose pussytoes	<i>Antennaria rosea</i>
Russow's sphagnum	<i>Sphagnum russowii</i>
Silver sedge	<i>Carex praegracilis</i>
Smallwing sedge	<i>Carex microptera</i>
Subalpine fir	<i>Abies bifolia</i>
Tall daisy	<i>Erigeron elatior</i>
Thyme-leaf speedwell	<i>Veronica serpyllifolia</i>
Timothy	<i>Phleum pratense</i>



Common name	Scientific name
Tweedy plantain	<i>Plantago tweedyi</i>
Varileaf cinquefoil	<i>Potentilla diversifolia</i>
Virginia strawberry	<i>Fragaria virginiana</i>
Water sedge	<i>Carex aquatilis</i>
Western yarrow	<i>Achillea lanulosa</i> ( <i>Achillea millefolium</i> )
Yellow pond-lily	<i>Nuphar lutea</i>

## Environmental Consequences

### No Action Alternative

The No Action Alternative would not change existing vegetation in the project area.

### Proposed Action Alternative

Under the proposed project, short-term disturbance to vegetation due to the access road and dam would occur on about 1.7 acres. To mitigate the effects to vegetation, the dam and approximately 8 feet of the road's running surface, as well as the cut and fill areas, would be reseeded and reclaimed (1.6 acres). Another 0.1 acres within the project area would not be reclaimed to allow for long-term ATV access.

Of the total project footprint, the vegetation on 13.4 acres may experience some alteration. It is assumed that vegetation would not be altered where there is existing surface water (0.5 acres, total). The vegetation in the inundated area is not expected to be altered substantially due to the brief period of time (four to six-week period) when the area would be covered by water. Open pockets of water and wetland areas that exist permanently are expected to persist with little change to vegetation species. The existing plant community is diverse and would continue to re-seed (ERO 2012). Some species transition may occur; willows, for example, are tolerant of inundation and may expand a little. More grasses and fewer forbs may exist over time. Sedge species that are more tolerant of inundation may out-compete with other species. Due to the small size of the reservoir and protective surrounding forest, detrimental edge effects to vegetation due to wind and wave action are not expected for the 4 to 6-week period when the area is inundated.

**Table 5. Summary of Vegetation Disturbances for Blanche Park Dam Reconstruction**

Project component	Acres affected	Vegetation
Access road construction (includes cut and fill areas)	0.9	Spruce-fir forest
Dam reconstruction	0.8	Upland brome grasses
Existing surface water covered	0.1	Open water
Existing wetland covered	0.1	Sedge wetland
Inundation	15.5	



<b>Existing surface water inundated</b>	0.5	Open water
<b>Existing wetland inundated</b>	8.1	Sedge, willow wetland
<b>Total (Road, Dam, Inundation)</b>	17.2	

In total, the project would require about 1,136 cubic yards of fill and 1,073 cubic yards of cut (net 63 cubic yards of fill). Additional clean local fill for the project would be obtained from the nearby pit at Military Park Reservoir (see Figure 1). During construction, top soil would be set aside and used for revegetation purposes. All surfaces affected from dam construction and cut and fill for access road shaping would be re-seeded, following construction, according to the reclamation activities described in the proposed action section.

## Wetlands

### Affected Environment

Wetlands exist throughout the Grand Mesa ecosystem and contribute an important functional role, providing habitat and forage as well as hydrological and nutrient cycling. Executive order 11990 (Federal Register, 1977) instructs agencies to minimize the destruction, loss or degradation of wetlands. Two wetlands have been mapped within the project area, totaling about 12.81 acres (ERO 2012). Dominant wetland vegetation includes a mosaic of herbaceous and scrub-shrub wetlands with sedges (*Carex rostrata*, *C. aquatilis*, *C. canescens*), willows (*Salix geyeriana*, *S. planifolia*), grasses (primarily *Calamagrostis canadensis*), and various forbs. A large wetland (12.77 acres) occupies the shallow basin of the pre-existing impoundment. The wetland is supported by an unnamed tributary and from groundwater/surface water inflow from the surrounding areas. A second small wetland occurs downstream of the existing dam, and covers about 0.04 acres along the unnamed tributary to Trickle Park Reservoir. This wetland is dominated by bluejoint reedgrass (*Calamagrostis canadensis*) and beaked sedge (*Carex utriculata*). Wetland soils and hydrology were documented during the field surveys. The wetland located within the facility's footprint is identified as a fen (a peat-accumulating wetland) in the Forest Service's fen inventory GIS layer.

### Environmental Consequences

#### No Action Alternative

The No Action Alternative would not change existing wetlands in the project area.

#### Proposed Action Alternative

Executive order 11990 (Federal Register, 1977) instructs agencies to minimize the destruction, loss or degradation of wetlands. Effects to wetlands associated with the project are expected to be minor or negligible. About 12.8 acres of wetlands are present in the project area. A portion of these wetlands is identified as a fen (a peat-accumulating wetland) in the Forest Service's fen inventory GIS layer. Impacts to wetlands are restricted to those within the facility's footprint as authorized by the original 1891 easement.

The Blanche Park Reservoir project falls under an agricultural exemption to Section 404 of the Clean Water Act (See Appendix A).

## Threatened, Endangered, Candidate and Proposed (TECP) Species: Canada Lynx and Colorado River Fishes

### Affected Environment.

Potential federally listed TECP species effected by the proposed construction and operation of a reconstructed Blanche Park Reservoir are summarized below (Table 6). Although the project area does not support suitable habitat for the Colorado River fishes, these four species could be affected by water depletions from the reconstruction project. A summary of USFS sensitive species is included in the Biological Evaluation for the project (USFS 2017). A total of 25 species do not have habitat in the analysis area or have no probability of occurrence, and were not considered further. Potential habitat for eight USFS sensitive species occurs in the analysis area including: boreal toad (*Bufo boreas boreas*), northern leopard frog (*Lithobates pipiens*), bald eagle (*Haliaeetus leucocephalus*), American marten, boreal owl (*Aegolius funereus*), northern goshawk (*Accipiter gentilis*), olive-sided flycatcher (*Contopus cooperi*), and pygmy shrew (*Sorex boyi*). These species were not observed during site surveys.

**Table 6. TECP species potentially affected by proposed action**

Species	Scientific name	Status	Habitat	Suitable habitat present?
<b>Gunnison sage grouse</b>	<i>Centrocercus minimus</i>	T	Sagebrush	No
<b>Yellow-billed cuckoo</b>	<i>Coccyzus americanus</i>	C	Open woodlands to urban areas	No
<b>Bonytail chub</b>	<i>Gila elegans</i>	E	Colorado River	No*
<b>Colorado pikeminnow</b>	<i>Ptychocheilus Lucius</i>	E	Colorado River	No*
<b>Green-lineage cutthroat trout</b>	<i>Oncorhynchus clarkii pleuriticus</i>	T	Mid- to high-elevation mountain streams	No
<b>Humpback chub</b>	<i>Gila cypha</i>	E	Colorado River	No*
<b>Razorback sucker</b>	<i>Xyrauchen texanus</i>	E	Colorado River	No*
<b>Canada lynx</b>	<i>Lynx canadensis</i>	T	Subalpine and upper montane forests	Yes
<b>Clay-loving wild buckwheat</b>	<i>Eriogonum pelinophilum</i>	E	Adobe hills	No
<b>Colorado hookless cactus</b>	<i>Sclerocactus glaucus</i>	T	Desert shrub communities 4,500-6,000' elevation.	No

\*Species could be affected by water depletions from the reconstruction project.

## Canada Lynx

The Canada lynx was federally listed as threatened in 2000 (FR 65 16052), and the Southern Rocky Mountains is considered primary habitat (Ruediger et al. 2000). Lynx habitat in Colorado is fragmented naturally by elevation, dry south and west exposures, alpine tundra, open valleys, and shrubland (McKelvey et al. 2000). Lower elevation montane forests of ponderosa pine, Douglas fir, and riparian corridors provide connective habitat that may facilitate dispersal and movement between primary habitats and provide additional foraging opportunities (Lynx Biology Team 2000).

The Southern Rockies Lynx Amendment (SRLA) provides management direction to promote the conservation of the Canada lynx for seven national forests in Colorado, including the GMUG (USFS, 2008). The SRLA identifies all lynx habitat in National Forests in the Southern Rocky Mountains as occupied. The project area contains the Green Mountain Lynx Analysis Unit (LAU), and lynx habitat and non-habitat areas have been mapped. In addition to mapped habitat, linkage areas for the lynx have been established in the GMUG forest, with the goal of ensuring population viability through population connectivity; however, none are documented in the project area (USFS 2010). The nearest lynx linkage area is approximately 18 miles northeast of the project area. For additional background information on the species, see the Biological Assessment (ERO 2013).

## Endangered Colorado River Fishes

Four endangered Colorado River fishes are down stream of the project area in the Gunnison and Colorado River: the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker. The basis for listing, including species background and habitat requirements, and cause for decline can be found at 59 Fed. Reg. 13374 (March 21, 1994). A Recovery Implementation Program for the fish has been implemented by the Service (Service, 2000). For additional species background information, see the Biological Assessment (ERO 2016).

## Environmental Consequences

### No Action Alternative

Under the No Action alternative, there would be no change to the existing environment and effects to USFS sensitive species or TECP species, including lynx and endangered Colorado river fishes, are not expected.

### Proposed Action Alternative

Under the proposed action, effects to TECP species may occur, including the Canada lynx and endangered Colorado River fishes. A summary of USFS sensitive species is included in the BE for the project. Due to the minor extent of habitat loss, impacts to USFS sensitive species are not expected.

### *Canada Lynx*

If lynx are in the area, increased human activity and noise from construction vehicles could result in lynx avoiding the project vicinity during construction. Direct effects from construction noise and increased human presence would end upon completion of construction. Construction would occur from approximately late June to mid-November and construction activities would occur during daylight hours, reducing the potential for direct disturbance to lynx during the winter

season, and during nighttime hours when lynx are more active. Some tree clearing and grading would take place adjacent to the existing reservoir and dam, and the new access road, within lynx habitat (Table 7).

**Table 7. Project impacts to lynx habitat in the Green Mountain LAU.**

Habitat type	Total acres, LAU	Project impact, acres	Percent lost
Primary suitable	19,838.86	2.28	0.011
Secondary suitable	4,271.51	0.00	0.000
Suitable lynx habitat	24,110.37	2.28	0.002
Non-suitable habitat	12,456.46	13.29	0.108

Traffic volumes and traffic speeds on roads can affect lynx. High traffic volumes can create a barrier to wildlife attempting to cross, and can result in indirect habitat loss or fragmentation or wildlife injury from vehicular collisions. Lynx have been struck and killed by vehicles in Colorado. The project is located along a gravel-surfaced USFS road with low seasonal traffic. The road is closed during the winter. The project would not result in any change in traffic, except the temporary construction traffic.

#### **Compliance with Southern Rockies Lynx Amendment (SRLA)**

The objectives, standards, and guidelines (OSGs) are included in the SRLA to reduce or eliminate adverse effects to lynx from a variety of multiple-use projects occurring on USFS lands. OSGs applicable to the proposed action are listed in the SRLA Record of Decision, Attachment 1-6, under Human Use Projects. Of special note is Objective HU 05, which states, “Manage human activities.... to reduce impact on lynx and lynx habitat.” Post-construction reclamation, including monitoring and weed management, to restore the habitat in the area is essential to compliance with Objective HU 05. In total, 1.68 acres of habitat loss would occur over the short term, and 0.12 acres of habitat would be lost as a result of the project over the long term. Due to the minor extent of habitat loss, the project “may affect, is not likely to adversely affect” the Canada Lynx (see Appendix A, Consultation), and the project is in compliance with the Southern Rockies Lynx Amendment.

#### ***Endangered Colorado River Fishes***

Endangered Colorado River fishes are not present in the project area and would not be directly affected by project activities; however, the Service has determined that any new water depletion in the lands surrounding habitat occupied by these species would result in an adverse effect to these species and their habitat. Potential effects to these fish from water depletions due to the Blanche Park Dam Reconstruction project were analyzed in a Biological Assessment (USFS, 2016). Based on the amount of water depleted for the project - including evaporative loss, downstream water use, use from flood irrigation and crop consumptive use- an estimated 44.16 acre-feet(AF)/year would be depleted. The Service concluded that due to the minor nature of water which would be depleted for the project (less than 100 acre-feet per year) the project fits under the umbrella of the final Gunnison River Basin Programmatic Biological Opinion (PBO) issued in 2009 (Service, 2009), and no further action is required at this time due to the existing Recovery Program in the upper Colorado River basin. See Appendix A, Consultation Documents.

## Visual

### Affected Environment

Forest vegetation contributes to the forest character of the Grand Mesa more than most landscape features. The form, color and texture of layered alpine vegetation, including mature tree stands of aspen, Engelmann spruce and subalpine fir, provide scenic views. According to the 1991 Forest Plan, the Management Prescription for the area is “7A; with a focus on wood and fibre production”. Visual Quality Objectives (VQO’s) surrounding the project area on the Grand Mesa include “partial retention” for any part of the project area that is within the viewshed of NFSR 125, and “modification” for the proposed dam and reservoir (USFS 1991, verbal and e-mail correspondence with Loren Paulson). The VQO of “partial retention” is defined (USFS 2017) as a setting “in which human activities may be evident, but must remain subordinate to the characteristic landscape.” The VQO of “modification” is defined as a setting “in which human activities may dominate the characteristic landscape but must, at the same time, use naturally established form, line, color, and texture appearing as a natural occurrence when viewed in foreground or middle ground.”

### Environmental Consequences

#### No Action Alternative

The No Action Alternative would not change the scenic values of the project area. There would be effects to existing VQO’s in the project area.

#### Proposed Action Alternative

The Proposed Action Alternative includes an access road on a south-facing slope. Some tree removal would be necessary for access road construction. Under the Proposed Action, tree removal, grading activities, and other construction activities as well as use of the access road would alter the viewshed from NFSR 125 and a nearby boat ramp and view from Park Reservoir (Figure 1). However, mature tree cover surrounding the road—including its diversion point from NFSR 125—would screen most of the road and avoid most visual impacts. The road would be used by construction equipment accessing the site for three to four months during 2017 and during 2018.

Following construction, the access road area would be re-seeded and reclaimed, leaving a small un-reclaimed ATV route for ongoing maintenance and operation activities that may be within view of NFSR 125. A total of about 0.12 acres of disturbance would remain as a permanent ATV access route, which may be visible over the long-term. Grasses, forbs, and low shrubs likely will colonize the route and serve to camouflage it from view. Maintenance on the road would be limited to occasional mowing to allow ATV access.

Changes to the landscape as a result of the proposed project would be consistent with the VQO of partial retention for the area within view of NFSR 125. The new access road would be visible, but primarily shielded by forested areas surrounding the road. Visual effects from the dam construction and inundated area would be consistent with the “modification” VQO. The new dam structure would be screened by existing vegetation and topography, and the water surface would be concealed by the dam structure. The 300-foot width of the dam structure would be partially visible to viewers to the south, and would not dominate the characteristic landscape.

## Hunting and Recreation

### **Affected Environment.**

The Grand Mesa National Forest consists of 541 square miles, with more than 300 lakes, 68 developed trailheads, 58 developed campgrounds, and many miles of trails (700 miles of wilderness trails, 1800 miles of summer on-motorized trails, 800 miles of summer motorized trails, and 730 miles of winter trails [USFS 2006]). Summer activities include mountaineering, climbing, hiking, trail rides (motorized and non-motorized), and mountain bike excursions. Big game hunting and pack trips occur in the area in the fall.

There are few recreational amenities within the immediate vicinity of the proposed project. A gravel boat ramp for non-motorized boating access to Trickle Park Reservoir is approximately 1,500 feet to the southwest of the project area. The proposed project is not in view from any nearby trailhead, campground, or scenic road. NFST 718 (Cedar Mesa Trail) is located approximately 1.5 miles to the southeast of the project area. The closest campsites are approximately 2 miles distant, one near Big Creek Reservoir No. 1 to the northwest, and another near Weir and Johnson Reservoir to the northeast (USFS, 2007). A concentrated number of trails and established campsites are approximately 5 miles west of the project area. No trails intersect with the project area.

### **Environmental Consequences**

#### **No Action Alternative**

Under the No Action alternative, there would be no construction traffic in the vicinity of Blanche Reservoir, and no effects from construction noise.

#### **Proposed Action Alternative**

Under the proposed action, a minor amount of increased traffic would occur on Surface Creek Rd (NFSR 125) and Trickle Park Road (NFSR 121). Construction of the access road would be in view of drivers along Surface Creek Road and boaters/fisherman on Park Reservoir. Nearby or off-trail hikers and hunters may be subject to increased noise due to construction. These effects would be short-term, occurring over a total of 6 to 10 months spanning 2 years while construction is taking place. Effects generally would not occur during the weekends when area recreationalists, boaters, and hunters are most likely to be in the area.

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